



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1418
Alexandria, Virginia 22304-1418
www.uspto.gov

APPLICATION NO.	FILING DATE	APPlicant NAME (INVENTOR)	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/170,289	01/29/2001	Atsushi SUGITA	2024501-80	0290

22880 7890 06/09/2003

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

17
EXAMINER

FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,289

Applicant(s)

SHIOTA ET AL.

Examiner

Michael J Feely

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-894)
- 3) ☐ Notice of Substantive Examination (PTO-895)
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Action on Appeal (PTO-414)

Art Unit: 1712

DETAILED ACTION

1. Claims 1-15 and 17 are pending in the instant application.

Claim Rejections - 35 USC § 102/103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The rejection of claims 1-15 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ross (US Pat. No. 6,204,201) stands for the reasons set forth in section 6 of the previous Office action (paper no. 13).
4. Claim 17 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ross (US Pat. No. 6,204,201).

Regarding claim 17, Ross teaches the use of, "nitrogen, hydrogen, argon, oxygen, any combination of gases," (column 6, lines 40-42). The use of any of these gases, excluding oxygen, would have inherently provided an atmosphere having an oxygen concentration of 1,000 ppm or lower because this range is interpreted to include no oxygen at all. This is especially the case where an inert gas, like argon is used.

Response to Amendment

5. The declaration under 37 CFR 1.132 filed April 18, 2003 is insufficient to overcome the rejection of claims 1-15 based upon Ross (US Pat. No. 6,204,201) as set forth in the last Office action because: the declaration fails to demonstrate criticality of the irradiation dose of 1 to 200 $\mu\text{C}/\text{cm}^2$. The experiments use dosages of 0, 50, 75, 100, 150, and 300 $\mu\text{C}/\text{cm}^2$. Applicant fails beyond the claimed range of 3.0, even at 300 $\mu\text{C}/\text{cm}^2$, which is above the claimed dosage range.

Response to Arguments

6. Applicant's arguments filed April 18, 2003 have been fully considered but they are not persuasive. Applicant present the following arguments: Ross is (1) silent about dielectric constant; (2) contains no disclosure of intentionally minimizing oxygen during electron beam curing; (3) discloses no examples of electron beam curing; and (4) says nothing specific about controlling the rate at which electron beam curing occurs.

Regarding argument (1): As was discussed in the rejection, Ross use siloxane starting materials (column 2, line 63 through column 3, line 65) that are within the scope of the instant invention. They are also within the scope of the instant Specification (see pages 3-4). By using the same starting materials, the dielectric constant prior to electron-beam treatment would have been the same in both Ross and the instant invention because a chemical composition and its properties are inseparable – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Furthermore, by providing the same process conditions, the effect on these starting materials, namely the reordering of atoms to provide Si-C-Si bonds, and the final properties of the treated materials, namely the dielectric constant, would have also been the same.

In addition, Applicants point to Table 4 on page 3 of the instant Specification. In all but one of these examples, the dielectric constant is not altered by the processing conditions. This seems to suggest that the dielectric constant is more associated with the starting materials than the electron beam treatment. This further supports the inherency rejection because Ross uses starting materials that are within the scope of the instant invention.

show certain features of applicant's invention, it is noted that the features upon which applicant

Art Unit: 1712

relies (i.e., no disclosure of intentionally minimizing oxygen during electron beam curing) are not recited in all of the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Only claims 8 and 17 limit oxygen content in the process; however, as discussed in the rejection of these claims, Ross teaches the use of, "nitrogen, hydrogen, argon, oxygen, any combination of gases," (column 6, lines 40-42). The use of any of these gases, excluding oxygen, would have inherently provided an atmosphere having an oxygen concentration of 1,000 ppm or lower because this range is interpreted to include no oxygen at all. This is especially the case where an inert gas, like argon is used.

Regarding argument (3): Although the Examples in Ross do not disclose the claimed electron beam dose range, it has been found that: disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or non preferred embodiments – *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971); and a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments – *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), *cert. denied*, 493 U.S. 975 (1989).

7. *Regarding argument (4):* In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant

relies (i.e., no disclosure of intentionally minimizing oxygen during electron beam curing) are not recited in the

Art Unit: 1712

from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Feely whose telephone number is 703-305-0268. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular

hours and 703-872-9311 for After Final communications.

should be directed to the receptionist whose telephone number is 703-308-0661.

Application/Control Number: 09/770,289

Page 6

Art Unit: 1712

Michael J. Feely

June 3, 2003

Robert A. Sawyer